

AzMERIT

Guide to the Sample Tests

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Prepared by the Arizona Department of Education and the American Institutes for Research®

Table of Contents

Introduction to This Guide	4
Guide Sections	4
Section I. Purpose of Sample Tests.....	5
Section II. Logging In to the Sample Test Site	6
Section III. Overview of Sample Test Features	9
Test Layout	9
Global and Context Menus.....	9
General Test Tools	12
Section IV. Keyboard Navigation.....	15
Keyboard Commands for Test Tools	15
Keyboard Commands for Test Selection Screens and Messages.....	16
Opening the Global Menu	17
Opening the Context Menus	17
Keyboard Commands for Grid Items.....	18
Section V. Item Types on Computer-Based Tests	20
Section VI. Writing Guides for English Language Arts (ELA)	25
Grades 3–5 Informative-Explanatory Essay Writing Guide	26
Grades 3–5 Opinion Essay Writing Guide	27
Grade 6 Argumentative Essay Writing Guide.....	28
Grades 6–8 Informative-Explanatory Essay Writing Guide	29
Grades 7–8 Argumentative Essay Writing Guide	30
Grades 9–11 Informative-Explanatory Essay Writing Guide	31
Grades 9–11 Argumentative Essay Writing Guide	32
Section VII. Calculator Guidance—Math	33
Section VIII. Paper-Based Testing (PBT).....	34
Consumable Booklets.....	34
Sample Paper Items—ELA	34
Sample Paper Items—Math	47
Section IX. CBT Sample Test Answer Keys	55
Grades 3–5 ELA Reading.....	55
Grades 6–8 ELA Reading.....	57
Grades 9–11 ELA Reading.....	60
Grades 3–4 Math	62

Grades 5–6 Math	67
Grades 7–8 Math	72
High School Math	76

Introduction to This Guide


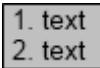

This user guide provides information for individuals accessing the AzMERIT computer-based Sample Tests. This introduction describes the contents of this user guide and includes a key for identifying icons and elements used.

Guide Sections

Each section begins on a new page, which allows for easy printing.

- [Section I. Purpose of Sample Tests](#) provides information about the intended use for the Sample Tests.
- [Section II. Logging In to the Sample Test Site](#) provides information on how to log in and select a Sample Test.
- [Section III. Overview of Sample Test Features](#) includes information about a Sample Test layout, global and context menus, and the test tools that are available.
- [Section IV. Keyboard Navigation](#) provides keyboard commands for general test navigation as well as for specific features.
- [Section V. Item Types on Computer-Based Tests \(CBT\)](#) gives an overview of the item types that students may see on the Sample Tests and general guidelines on how to respond to items.
- [Section VI. Writing Guides for English Language Arts \(ELA\)](#) includes the ELA Writing Guides that students will be able to use during the test administration.
- [Section VII. Calculator Guidance—Math](#) provides information on the use of calculators on the AzMERIT tests.
- [Section VIII. Paper-Based Testing \(PBT\)](#) provides information on the Paper-Based version of the Computer-Based AzMERIT tests, including sample item formats.
- [Section IX. CBT Sample Test Answer Keys](#) provides answer keys and correct answers for items on each of the CBT Sample Tests.

Table 1. Key Icons and Elements found in this User Guide

Icon	Description
	This symbol accompanies helpful information or reminders.
	Text that appears in gray outlined boxes provides instructions relevant to the task described. <ul style="list-style-type: none">• Numbered (ordered) lists provide step-by-step instructions.• Bulleted lists provide instructions that do not need to be performed in a specific order.
	Text in brackets is used to indicate a link or button that is clickable.

Section I. Purpose of Sample Tests

The AzMERIT Sample Tests are a valuable resource for students and families, as well as district and school administrators and educators. The purpose of the Sample Tests is to allow various users to become familiar with the AzMERIT Computer-Based Testing (CBT) system and the different formats of AzMERIT test questions. It is important that students who will take the CBT AzMERIT test have an opportunity to take a CBT Sample Test prior to testing so they may become familiar with the types of questions they will encounter and the various tools available to use throughout the tests.

Anyone can access and take a CBT Sample Test by logging in as a guest user on the Sample Test page on the AzMERIT portal. Schools may also administer the Sample Tests using the Secure Browser in order to practice starting a test session and logging students into the CBT system.

Computer-Based Sample Tests are available by grade bands for each content area:

- Grades 3–5 ELA Writing and Reading
- Grade 6 Writing
- Grades 7–8 Writing
- Grades 6–8 ELA Reading
- High School ELA Writing and Reading
- Grades 3–4 Math
- Grades 5–6 Math
- Grades 7–8 Math
- High School Math

While the Sample Tests do present the various types of items students will encounter on the AzMERIT tests, the Sample Tests are not to be used as a predictor of performance on upcoming AzMERIT tests. The best way to prepare students is standards-based instruction. All of the items on AzMERIT are aligned to the Arizona College and Career Ready Standards for English Language Arts/Literacy and Math for each particular grade level. Answer keys are provided, however, responses on the sample tests will not be scored. More information on the standards and the AzMERIT testing structure and blueprint can be found on the Arizona Department of Education website at www.azed.gov.

Certain item types on the CBT will be rendered differently on the Paper-Based Test (PBT). To view the various item types that will be on the PBT, other than multiple choice, please refer to Section VIII—Paper-Based Testing.

Section II. Logging In to the Sample Test Site

Users must use a supported web browser to access the Sample Tests. The supported web browsers for the Sample Tests are Firefox 10–30, Chrome 19–35, Safari 4–7, or Internet Explorer 10 or 11.

The instructions in this section are to be used when logging into the Sample Tests as a guest. For schools that want to access the Sample Tests using the Secure Browser, detailed instructions can be found in the *Test Administrator (TA) User Guide*, which can be found on the portal at <http://azmeritportal.org/resources/?section=2>.

1. **Open a supported web browser** on your computer or tablet.
2. **Navigate to the AzMERIT portal** (<http://azmeritportal.org/>).
3. Click [Sample Tests]. The **Sample Tests login screen** will load.
4. **Log in to the Sample Tests.** You will log in as a guest user.

AzMERIT | Arizona's Statewide Achievement Assessment
for English Language Arts and Mathematics

Student Sample Test

Please Sign In

☒ **Guest User**

First Name:

SAISID:

☒ **Guest Session**

Session ID: - -

Run Diagnostics Browser: Firefox v35

AzMERIT Sample Tests

The purpose of the Sample Tests is to allow various users to become familiar with the AzMERIT Computer-Based testing (CBT) system and the different formats of AzMERIT test questions. The Sample Tests are not to be used as a predictor of performance on upcoming AzMERIT tests. For more information about the Sample Tests, please refer to the AzMERIT Guide to the Sample Tests at azmeritportal.org/.

Login information is not required for the Sample Tests. Click Sign In to access the Sample Tests as a guest.

- a. Click [Sign In]. After you log in, the **Is This You?** screen will appear.

5. **Select a grade level.**

Is This You?

Please review the information below. If all of the information is correct, click [Yes]. If not, click [No].

First Name: GUEST
SAISID: GUEST 0
Last Name: GUEST

Student Grade Level: **Select Grade**

Date of Birth: None
School: GUEST School

- a. From the *Student Grade Level* drop-down list, select a grade.
- b. Click [Yes]. The **Your Tests** screen will appear.

6. **Select an available test.**

The list of available tests depends on the grade level selected.

Your Tests

Select a test.

Start 6-8 ELA Reading
This is opportunity 1 of 99

Start 7-8 ELA Writing
This is opportunity 1 of 99

Start 7-8 Math
This is opportunity 1 of 99

- a. To select a test, click the test name. The **Test Verification** screen will appear.



Note: If the test you want to take is not displayed, click [**Back to Login**]. You will be logged out. Sign in again and select a different grade level.

7. **Verify your test information.**

Is This Your Test?

Session ID: GUEST SESSION

6-8 ELA Reading

Color Contrast: Black on White

Language: English

Text-to-Speech: Instructions

Print Size: No default zoom applied

Is the test listed above the test you want to take? If it is, click [Yes, Start My Test]. If not, click [No].

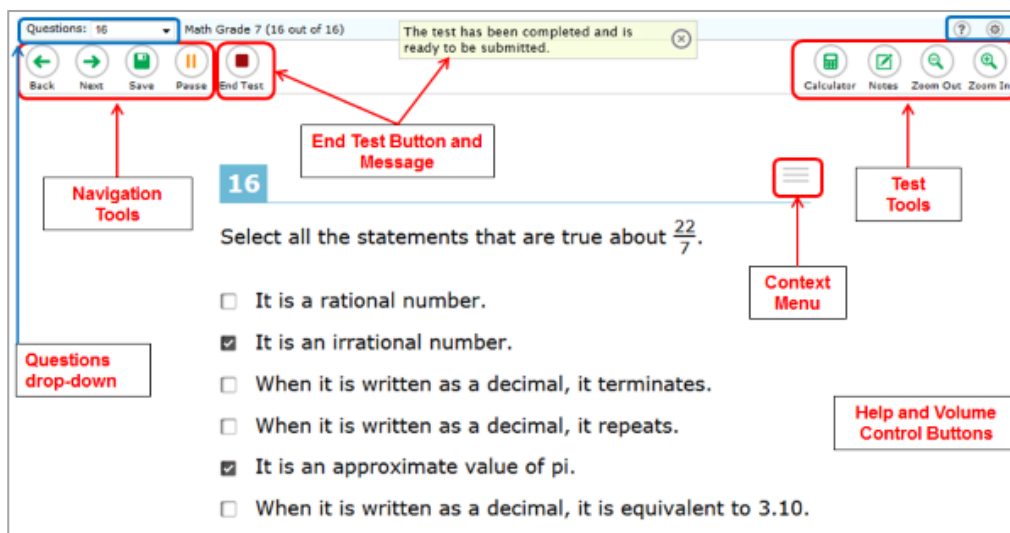
- a. Review the information on this page and verify that your test settings are correct.
 - If the test name or test settings are incorrect, click [**No**].
 - If the test name and test settings are correct, click [**Yes, Start My Test**] when you are ready to begin. The **Test Instructions and Help** screen will appear.
 - If you chose an ELA Reading test, you will be prompted to check the sound settings on your computer or device. After confirming you can hear the sound, click [**Yes**].
- b. On the **Test Instructions and Help** screen, click [**Begin Test Now**].

Section III. Overview of Sample Test Features

This section provides an overview of what a test page might look like. Information about available test tools and how to access them is also provided.

Test Layout

This sample image for an ELA test shows the primary features and available tools



Each test has two major sections:

- **Global Menu bar** (contains global tools and navigation buttons, as well as the help button)
- **Test Content** (displays test content, including stimuli and items)
 - Some tools are available only by accessing a context menu for that passage or stimulus, item, or selected-response option. For more information, see the next page.

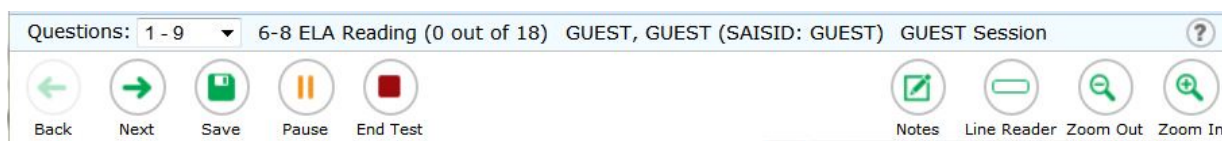
Global and Context Menus

The Global and Context Menus allow students to access on-screen tools. These tools can be accessed using a mouse or keyboard shortcuts. On tablets, the context menus are accessed via a Menu button. For information about keyboard shortcuts, refer to Section IV. Keyboard Navigation.

Global Menu

The Global Menu contains all the visible tools displayed at the top of the student's test screen. Most universal tools, as well as the student help button, are in the Global Menu.

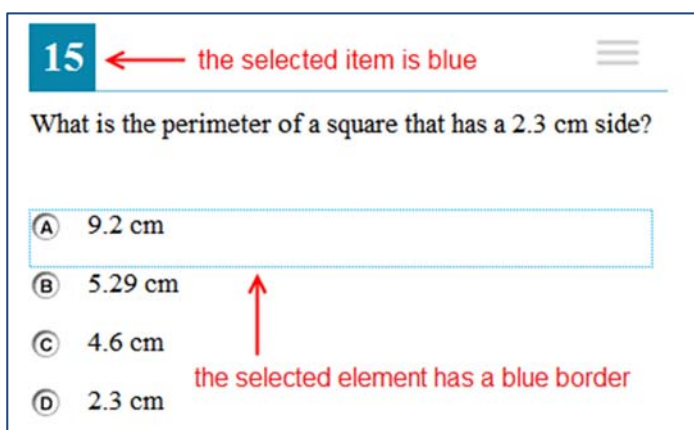
Sample Global Menu



Context Menus and Test Elements

Tools such as the highlighter and strikethrough option are accessed using context menus. The context menus contain the options available for each area of a test item on a page. These areas are called *elements*.

Overview of Elements for Multiple-Choice Items



Each element has its own context menu. Elements include passages or prompts, test items, and answer options (A, B, C, and D). Each answer option is a single element.

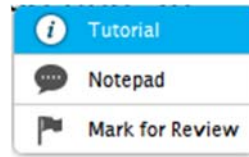
Opening a Context Menu

To view the context menu for an element using a mouse, simply right-click in that area. The context menu for that element will appear. (If students are using a single-button mouse, they should press the [Ctrl] key on the keyboard and then click.

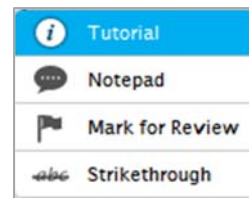
The context menu options vary depending on the following:

- The element type (passage, question, or answer option).
- The tools available to students.
- The test the student is taking.

Sample Context Menu for Questions





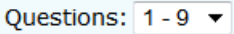
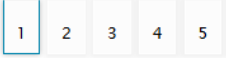




Sample Context Menu for Answer Options










General Test Tools






The following test tools are available:

- **Global Tools:** Global tools are those that appear at the top of the screen in the gray banner.
- **Stimulus/Question Tools:** These tools are specific to stimuli and questions and are accessed by clicking icons above an item or by right-clicking in the stimulus, question, or answer option areas.

Global Tools	Description
Help button 	The [?] button at the top right will open the on-screen <i>Test Instructions and Help Guide</i> window.
Navigation buttons 	The [Back] and [Next] buttons in the top left corner permit you to move between pages on a test. <ul style="list-style-type: none"> • For <i>Math</i> tests and <i>ELA Reading</i> tests, clicking the navigation buttons will permit you to move between questions. • For <i>ELA Writing</i> tests, clicking [Next] will prompt you to end the test.
Questions drop-down list 	This feature enables you to quickly return to a specific test page. Questions that were marked for review will display “(marked).”
Question buttons 	Some passages have multiple test questions. You can move between questions by using the Question buttons at the top right of the screen.
Save button (Optional) 	The [Save] button allows you to manually save technology-enhanced questions. This is an optional feature. If you do not click this button, your answers will still be saved automatically.
Pause button 	The [Pause] button allows you to pause and exit the test.
Notes button 	Click the [Notes] button to open an on-screen notepad. You can enter notes for yourself and save them. These notes are global and will remain in the pop-up window throughout the test. <i>Note: The Notes tool is only available for the ELA tests.</i>
Zoom buttons 	Use the [Zoom In] and [Zoom Out] buttons to increase and decrease the size of text and graphics within a single test page. Four levels of magnification are available.

Global Tools	Description
Line Reader button 	Use the [Line Reader] button to highlight a single line of text at a time in passages and questions.
Dictionary/Thesaurus button 	Search the Merriam-Webster dictionary or thesaurus without leaving the test. (Writing test only)
Calculator button 	Click the [Calculator] button to open the on-screen calculator. <i>Note: The calculator is available only for Part I of the Grades 7–8 Math and Parts I and II of the End-of-Course (EOC) Math tests.</i>
End Test button 	Click this button to begin the process of submitting the test.

Stimulus/Question Tools	Description
American Sign Language*	<p>To view audio content translated into American Sign Language via an on-screen video, select American Sign Language from the context menu.</p> <p><i>Note: This tool is available only for listening items, and the setting must be selected in in the Sample Test TA Interface when the student logs in.</i></p>
Closed Captioning*	<p>Stimuli with audio elements automatically display closed captions.</p> <p><i>Note: This tool is available only for listening items, and the setting must be selected in in the Sample Test TA Interface when the student logs in.</i></p>
Highlighter 	<p>Highlight a section of text in a passage or test question.</p> <ul style="list-style-type: none"> To highlight text, select text on the screen, right-click with the mouse, and select [Highlight Selection]. To remove all highlighting from the question, right-click anywhere on the question and select [Reset Highlighting].
Mark for Review 	Select Mark for Review from the question context menu. The question is labeled “(marked)” in the <i>Questions</i> drop-down list. To remove the (marked) status, select Unmark Review Question .
Student Comments 	<p>Each Math question has a tool that allows you to save a comment about the question. To access this tool, select Notepad from the question context menu.</p> <p><i>Note: The Notepad tool is only available for the Math tests.</i></p>

Stimulus/Question Tools	Description
Stimulus Expansion Tool 	<p>Some test pages have a passage on the left side of the page. You can expand this section.</p> <ul style="list-style-type: none"> Click the icon to expand the left section so that it takes up most of the screen. To collapse the section, click the double arrow icon again.
Strikethrough 	<p>For multiple-choice questions, you can "eliminate" an option and focus on the options they think may be correct.</p> <ul style="list-style-type: none"> To <i>strikethrough</i> an answer option, right-click on the option and select [Strikethrough]. A line will appear through the text or image. To <i>remove the strikethrough</i> from an answer option, right-click on the option and select [Undo Strikethrough].
Tutorial 	<p>Each question has a tutorial video that you can watch to learn more about responding to that type of question. To view the tutorial video, select Tutorial from the question context menu.</p>
Text-to-Speech 	<p>Listen to test questions and answer options.</p> <p>This feature is only available for students that require a read aloud accommodation, and for whom Accommodated Text to Speech has been indicated in TIDE or the TA Interface prior to testing.</p>
Writing Guide 	<p>View the on-screen writing guide (Writing tests only).</p>

* Tool/setting may be indicated in Sample Test TA Interface for use in Sample Tests only. These settings MUST be set in TIDE by an authorized user for the Operational Tests.

Section IV. Keyboard Navigation

Any student using a desktop, laptop, or Chromebook can use keyboard commands to navigate between test elements, features, and tools. Keyboard commands are not available for tablets.












Note: Keyboard commands require using the primary keyboard. If your keyboard contains a numeric keypad (often on the right side), do not use the keys in that area.

Keyboard Commands for Test Tools

Students can use these commands to navigate between test elements, features, and tools.

Button/ Image	Description of Function	Keyboard Commands
	Open the GLOBAL MENU	[Ctrl] + [G]
	Go to the NEXT test page	[Ctrl] + [→] (or use the Global Menu)
	Go to the PREVIOUS test page	[Ctrl] + [←] (or use the Global Menu)
	Move to the NEXT ELEMENT (on a page containing multiple test questions and/or a reading passage; on the writing test you will need to use the space bar if you want to indent a paragraph.)	[Tab]
	Move to the PREVIOUS ELEMENT (on a page containing multiple test questions and/or a reading passage)	[Shift] + [Tab]
	Select OPTION A	[Tab] to move between answer choices. [Space] to select it as an answer.
	Select OPTION B	
	Select OPTION C	
	Select OPTION D	
	ZOOM IN (increase the size of text and graphics on a page)	[Ctrl] + [G] (via Global Menu)
	ZOOM OUT (decrease the size of text and graphics on a page)	[Ctrl] + [G] (via Global Menu)
	Open the global NOTES tool (ELA Reading and ELA Writing only)	[Ctrl] + [G] (via Global Menu)
	Open the CALCULATOR (Grades 7, 8 and EOC Math tests only)	[Ctrl] + [G] (via Global Menu)

Button/ Image	Description of Function	Keyboard Commands
	PAUSE your test	[Ctrl] + [G] (via Global Menu)
	END TEST and submit it	[Ctrl] + [G] (via Global Menu)
	SCROLL UP in an area of the test page	[↑]
	SCROLL DOWN in an area of the test page	[↓]
	SCROLL to the RIGHT in an area of the test page	[→]
	SCROLL to the LEFT in an area of the test page	[←]
	Open the CONTEXT MENU (for the selected passage, question, or answer option)	[Ctrl] + [M]
	Open a TUTORIAL to view information about that question type	[Ctrl] + [M] (via Context Menu)
	Open the question STUDENT COMMENTS to enter a comment about that question (Math tests only)	[Ctrl] + [M] (via Context Menu)
	MARK/UNMARK a question for review	[Ctrl] + [M] (via Context Menu)
	HIGHLIGHTER (highlight text on the page)	[Ctrl] + [M] (via Context Menu)
	STRIKETHROUGH an answer option	[Ctrl] + [M] (via Context Menu)
	Open the WRITING GUIDE	[Ctrl] + [M] (via Context Menu)

Keyboard Commands for Test Selection Screens and Messages

Use these keyboard commands to select options on the login screens or on pop-up messages that appear during the test. For example, if you see a screen that has [No] or [Yes] buttons, you can use these keyboard commands to navigate between the buttons and select one.

Keyboard Command	Function
[Tab]	Move to the next option
[Shift] + [Tab]	Move to the previous option

[Enter]	Select the shaded option
----------------	--------------------------

Opening the Global Menu

To access the Global Menu with keyboard commands:

1. Press the **[Ctrl] + [G]** keys to view the Global Menu. The menu will appear on the screen.
2. Use the **Up** or **Down** arrow keys on your keyboard to move between options in the menu. Each option will be highlighted as you arrow up or down.
3. Press the **[Enter]** key to select the highlighted menu option.
4. Press the **[Esc]** key to close the Global Menu.

Opening the Context Menus

To access Context Menus with keyboard commands:

Navigating to an Element

1. Press the **[Tab]** key to navigate between questions, the answer options, and the reading passage.

Opening a Context Menu for an Element

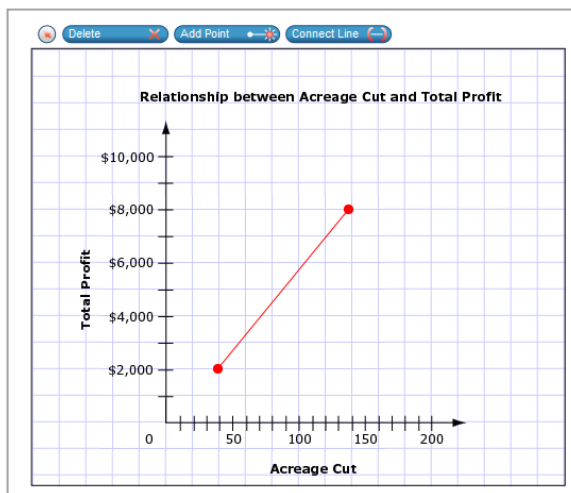
1. Press the **[Ctrl] + [M]** keys on the keyboard. The Context Menu for that element will appear.
2. Use the **Up** or **Down** arrow keys on your keyboard to move between options in the menu. Each option will be highlighted as you arrow up or down.
3. Press the **[Enter]** key to select the highlighted menu option.
4. Press the **[Esc]** key to close the Context Menu.

Keyboard Commands for Grid Items

Interactive items with an Add Point, Add Line or Add Arrow tool may have up to three main sections:

- Answer Space (the large area that takes up the most space)
- Action Button Row (at least one action button such as **[Add Point]** will be present at the top)
- Object Bank (a section on the left that includes objects to move to the Answer Space)

Figure 1. Sample Item with Point and Line Tools



To move between the main sections (Object Bank, Button Row, and Answer Space)

- Press the **[Tab]** key. Navigation is “clockwise” (from top to right to bottom to left).
- To move counter-clockwise, press **[Shift] + [Tab]**.
- The “active” space or button will have a border.

To add an object from the Object Bank to the Answer Space:

- Make sure the Object Bank is active.
- Use the up and down arrows to move between available objects. The selected object will have a blue background.
- Press the **[space bar]** to add the selected object to the Answer Space.

To select an Action Button and place the object (point or line) in the Answer Space:

- Make sure the Button Row is active.
- Use the left or right arrow keys to move between action button options.
- Press **[Enter]**.
- Press the **[space bar]** to apply the dot, arrow, or line to the Answer Space.

To move objects, points, lines, and arrows around in the Answer Space:

- Make sure the Answer Space is active.
- Press **[Enter]** to move between objects in the Answer Space. The selected object will have a border.
- Press the **[space bar]**, then use the arrow keys to move the object.

To delete objects, points, lines, and arrows in the Answer Space:

- Make sure the Button Row is active.
- Press the left or right arrow to select the [**Delete**] button. The active button will turn white.
- Press [**Tab**] to move to the Answer Space.
- Press [**Enter**] to move between objects in the Answer Space. The selected object will have a border.
- Press the [**space bar**] to delete the object.

Section V. Item Types on Computer-Based Tests

This section contains sample item types that appear on the Sample Tests for AzMERIT. The following item types appear: editing task, grid, hot text, multiple-choice, multi-select, open-response, writing prompt, and equation.



Note about technology-enhanced item types:

Students can manually save their answer before moving to the next item on the test. A **[Save]** button will appear at the top of the screen for these items. If students do not click **[Save]**, the system will automatically save the responses when they move on to the next item or pause the test.

Editing Task Items

To answer responses for editing task items, click the highlighted word or phrase. (Typically, the highlighted word or phrase will have a light green background.)

Some editing task items require you to enter the replacement word or phrase.

Other editing task items require you to select the replacement word or phrase from a menu.

12 Click the highlighted word to open the editing task menu.

Correct the highlighted mistake in the passage below.

In the theater itself, there are enough red velvet seats for 422 patrons. The aisles pull your gaze forward to the magnificent gold-colored curtains **what** conceal the screen. After everyone has taken a seat, the lights are dimmed, and the curtains are drawn aside, the screen lights up with black and white images from another time.

Correct the highlighted mistake in the passage below.

In the theater itself, there are enough red velvet seats for 422 patrons. The aisles pull your gaze forward to the magnificent gold-colored curtains **what** conceal the screen. After everyone has taken a seat, the lights are dimmed, and the curtains are drawn aside, the screen lights up with black and white images from another time.

Replace "what" with:

OK Cancel

17

Correct the highlighted mistake in the reading excerpt below.

Juan declared that it was the **better** party ever. Eric felt special one who cracked the piñata.

Replace "better" with:

- most good
- most good
- more better
- best
- better

Evidence-Based Selected Response Items

This type of item has multiple parts. All parts of the question should be answered. In ELA, this item type will be accompanied by a passage on the left side of the screen.

22

Part A

Which statement is true?

- (A) All parallelograms are rectangles.
- (B) All quadrilaterals are rectangles.
- (C) All rhombuses are rectangles.
- (D) All squares are rectangles.

Part B

Which statement about the two shapes is true?

- (A) The only difference between the two shapes is the number of congruent sides.
- (B) The only difference between the two shapes is the number of sides.
- (C) The only difference between the two shapes is the number of congruent angles.
- (D) There are no differences between the two shapes.

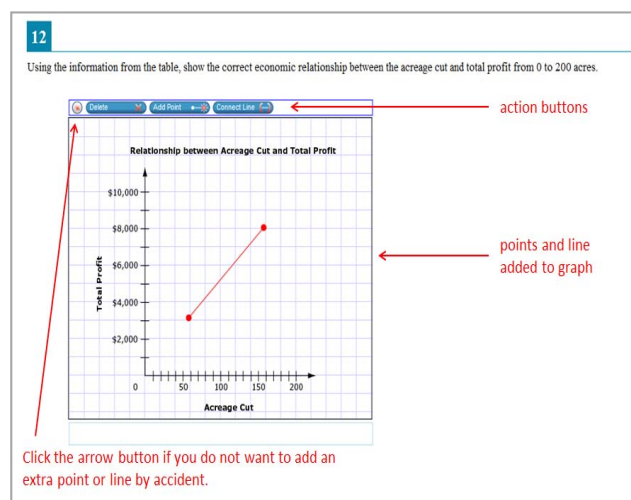
Grid Items with Action Buttons

Grid items require using point, line, or arrow buttons to create a response.

To add a point, click the **[Add Point]** button and then click on the location in the grid where the point should appear.

To add a line or arrow, click the **[Connect Line]** or **[Add Arrow]** button and then click on the desired beginning and end points of the line in the grid.

To delete a point, line, or arrow, click the **[Delete]** button and then click on the object you want to remove. (Clicking on a point will also remove adjacent lines.)



Note: The “active” action button is white.

Hot Text Items

Hot Text items require you to either click on a response option or drag a response option to another location.

5

Before the War of 1812, different groups were trying to reach their goals. These goals were part of what started the War of 1812.

Place the group label in the blank box next to their goal.

Goals	Group
Wanted to gain northern and western land	?
Wanted to maintain control of forts and the fur trade	?
Resisted settlers moving into the region	?

Drag your response to each answer box

available response options

Groups

American Indians	British
Americans	Mexicans
Texans	

Multiple-Choice Items

Multiple-choice items require you to select a single answer option.



Note: You may click anywhere on the answer or click in the circle that contains A, B, C, or D. The selected answer circle will darken.

7

Lisa is trying to earn money to buy a bike. She can either open a lemonade stand or sell cookies, but she does not have the time to do both.

What is the opportunity cost for Lisa if she decides to open a lemonade stand?

☐ A She cannot buy a bike.

☐ B She cannot sell lemonade.

☒ C She cannot sell any cookies.

☐ D She cannot earn any money.

Click on an answer option or row to select it as your answer.

Multi-Select Items

Multi-select items allow you to select more than one answer option. These are different from multiple-choice items, which allow you to select only one response.



Note: Some items may ask you to select a specific number of responses.

12

Select the values that are greater than or equal to $\frac{1}{2}$.

- ☐ 0.6
- ☐ $\frac{2}{6}$
- ☐ $\frac{5}{8}$
- ☐ .5
- ☐ .45
- ☐ One Fifth
- ☐ $\frac{2}{10}$

Click the checkbox next to each option you want to select as a response. You may select more than one option.

Open-Response Items

Open-response items require you to use the keyboard to enter the response into a text field.

Different types of open-response items may appear on the test.

12

What is the resolution of the story?

Type your answer in the space provided.

Click in the text box and type your answer using the keyboard.

Writing Prompt Items

Writing prompt items will require you to use features of an online word processor. You can perform various tasks within the online word processor such as bold text, use bullet points, underline, etc. In order to indent a paragraph, you must press the space bar at least 5 times.

1

Write about your favorite birthday memory.

Formatting Buttons Numbering, Bullets, & Indent Cut, Copy, Paste, Undo, & Redo Insert Symbol

B *I* U \mathcal{I}_x 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. X Copy Paste Undo Redo Ω

Response area

Equation Items

Equation items require you to enter a valid statement that answers the question, such as $y=3x+2$.

To enter an equation, click the button for each letter or symbol. The equation entered will be in blue text.

4

A salesperson earns \$125 a day, plus a commission of 5% of the price of each item she sells. The salesperson sold one item yesterday that was \$750.

Create an equation that can be used to determine the amount of money the salesperson earned yesterday.






$y=$ Equation response field

Navigation buttons

1	2	3	x	y
4	5	6	+	-
7	8	9	<	>
0	.	-	$\frac{\Box}{\Box}$	$\sqrt{\Box}$






Special symbols (fraction, exponent, square root, etc.)



About the Navigation Buttons for Equation Items

Navigation Button	Description
Move Left 	The straight left arrow button allows you to move the cursor before an existing character.
Move Right 	The straight right arrow button allows you to move the cursor after an existing character.
Undo 	The curved left arrow button allows you to undo the previous action.
Redo 	The curved right arrow button allows you to redo the previous undone action.
Delete 	The delete button allows you to delete characters.

About Special Symbols

Special symbols are easiest to use if entered prior to inserting text. To add a special symbol to an equation, select the corresponding button. After entering a number or symbol, use the “Move Left” and “Move Right” buttons to move the cursor between fields.

Special Symbol	Description
Fraction 	This symbol allows you to enter a fraction into the equation editor. Select the numerator, then navigate to the denominator, and then select the value for that field.
Exponent 	This symbol allows you to enter an exponent into the equation editor. After you enter the base number, select the exponent button, and then enter the exponent number.
Subscript 	This symbol allows you to enter a subscript into the equation editor. After you enter the base number, select the subscript button, and then enter the subscript number.
Parentheses 	This symbol allows you to enter parentheses . Once you select the symbol, the parentheses will appear in the equation editor. Then select the numbers and symbols that should appear between the open and close parentheses.
Absolute Value 	This symbol allows you to enter an absolute value . Once you select the symbol, the lines will appear in the equation editor. Then select the numbers and symbols that should appear between the lines.

Special Symbol	Description
Square Root 	<p>This symbol allows you to enter a square root value. Once you select the symbol, the radical sign will appear in the equation editor. Enter the number that should appear under the radical sign.</p>
nth Root 	<p>This symbol allows you to enter an nth root value. Once you select the symbol, the radical sign will appear in the equation editor. Enter the number that should appear under the radical sign. Use the straight left arrow to navigate to the nth field and enter the number that should appear there.</p>

Section VI. Writing Guides for English Language Arts (ELA)

The AzMERIT ELA test will have a Writing part and a Reading Part 1 and Part 2 for all grade levels. The **structure** of the sample AzMERIT writing test is similar to the actual AzMERIT writing test. Each writing test will have one or more passages that relate to a prompt. Students will create a written response to the prompt. Students will not answer comprehension questions about the prompt. Scratch paper is permitted on both the CBT and PBT writing tests in order for students to compose a rough draft prior to formulating a “final” copy in the paper booklet or in the word processing area on the computer.

CBT— On the CBT writing tests students will have access to one or more passages that relate to a prompt, an electronic version of the Writing Guide and a word processing area to type their “final” response.



Note: New for Spring 2016 Sample Tests students will access the Writing Guide using the context menu rather than the global Writing Guide tool that was used last year.

PBT— On the PBT the students will have access to one or more passages that relate to a prompt, a print copy of the Writing Guide and a “final” copy area to write their response. On paper, the Writing Guide will also appear after the writing prompt and before the final copy area on the PBT. On the PBT, there will be three final copy pages with a line spacing of .375” for grades 3 and 4 (wide ruled) and .3” for grades 5–11 (college ruled).

The next several pages of this section contain Writing Guides for each grade-level band that will be available to students on AzMERIT.

Grades 3–5 Informative-Explanatory Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clearly stated controlling idea and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained controlling idea with little or no loosely related material • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end, including a satisfying introduction and conclusion 	<p>The response provides thorough and convincing support/evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Relevant evidence integrated smoothly and thoroughly with references to sources • Effective use of a variety of elaborative techniques (including but not limited to definitions, quotations, and examples), demonstrating an understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility
Conventions	
<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage, but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling 	

Grades 3–5 Opinion Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clearly stated opinion and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained opinion with little or no loosely related material • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end with a satisfying introduction and conclusion 	<p>The response provides thorough and convincing support/evidence for the writer's opinion that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Relevant evidence integrated smoothly and thoroughly with references to sources • Effective use of a variety of elaborative techniques, demonstrating understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility
Conventions	
<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage, but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling 	

Grade 6 Argumentative Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration	Conventions
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear claim and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> Strongly maintained claim with little or no loosely related material Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas Logical progression of ideas from beginning to end with a satisfying introduction and conclusion Appropriate style and tone established and maintained 	<p>The response provides thorough, convincing, and credible support, citing evidence for the writer's claim that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> Smoothly integrated, thorough, and relevant evidence, including precise references to sources Effective use of a variety of elaborative techniques to support the claim, demonstrating an understanding of the topic and text Clear and effective expression of ideas, using precise language Academic and domain-specific vocabulary clearly appropriate for the audience and purpose Varied sentence structure, demonstrating language facility 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> Some minor errors in usage but no patterns of errors Adequate use of punctuation, capitalization, sentence formation, and spelling

References and Citations
<p>When referring to evidence and information from passages, students should use paraphrasing and short quotations. To credit sources, students should use informal, in-text citations (e.g., MLA author or title tags).</p>

Grades 6–8 Informative-Explanatory Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration	Conventions
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear controlling idea and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> Strongly maintained controlling idea with little or no loosely related material Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas Logical progression of ideas from beginning to end with a satisfying introduction and conclusion Appropriate style and objective tone established and maintained 	<p>The response provides thorough and convincing support, citing evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> Smoothly integrated, thorough, and relevant evidence, including precise references to sources Effective use of a variety of elaborative techniques (including but not limited to definitions, quotations, and examples), demonstrating an understanding of the topic and text Clear and effective expression of ideas, using precise language Academic and domain-specific vocabulary clearly appropriate for the audience and purpose Varied sentence structure, demonstrating language facility. 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> Some minor errors in usage but no patterns of errors Adequate use of punctuation, capitalization, sentence formation, and spelling

References and Citations

When referring to evidence and information from passages, students should use paraphrasing and short quotations. To credit sources, students should use informal, in-text citations (e.g., MLA author or title tags).

Grades 7–8 Argumentative Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration	Conventions
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear claim and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> Strongly maintained claim with little or no loosely related material Clearly addressed alternate or opposing claims Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas Logical progression of ideas from beginning to end with a satisfying introduction and conclusion Appropriate style and tone established and maintained 	<p>The response provides thorough, convincing, and credible support, citing evidence for the writer's claim that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> Smoothly integrated, thorough, and relevant evidence, including precise references to sources Effective use of a variety of elaborative techniques to support the claim, demonstrating an understanding of the topic and text Clear and effective expression of ideas, using precise language Academic and domain-specific vocabulary clearly appropriate for the audience and purpose Varied sentence structure, demonstrating language facility 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> Some minor errors in usage but no patterns of errors Adequate use of punctuation, capitalization, sentence formation, and spelling

References and Citations
<p>When referring to evidence and information from passages, students should use paraphrasing and short quotations. To credit sources, students should use informal, in-text citations (e.g., MLA author or title tags).</p>

Grades 9–11 Informative-Explanatory Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration	Conventions
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear controlling idea and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> Strongly maintained controlling idea with little or no loosely related material Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas Logical progression of ideas from beginning to end with a satisfying introduction and conclusion Appropriate style and objective tone established and maintained 	<p>The response provides thorough and convincing support, citing evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> Smoothly integrated, thorough, and relevant evidence, including precise references to sources Effective use of a variety of elaborative techniques (including but not limited to definitions, quotations, and examples), demonstrating an understanding of the topic and text Clear and effective expression of ideas, using precise language Academic and domain-specific vocabulary clearly appropriate for the audience and purpose Varied sentence structure, demonstrating language facility 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> Some minor errors in usage but no patterns of errors Adequate use of punctuation, capitalization, sentence formation, and spelling

References and Citations
<p>When referring to evidence and information from passages, students should use paraphrasing and short quotations. To credit sources, students should use informal, in-text citations (e.g., MLA author or title tags).</p>

Grades 9–11 Argumentative Essay Writing Guide

Purpose, Focus, and Organization	Evidence and Elaboration	Conventions
<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear claim and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained claim with little or no loosely related material • Clearly addressed alternate or opposing claims • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end with a satisfying introduction and conclusion • Appropriate style and tone established and maintained 	<p>The response provides thorough, convincing, and credible support, citing evidence for the writer's claim that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Smoothly integrated, thorough, and relevant evidence, including precise references to sources • Effective use of a variety of elaborative techniques to support the claim, demonstrating an understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling

References and Citations
<p>When referring to evidence and information from passages, students should use paraphrasing and short quotations. To credit sources, students should use informal, in-text citations (e.g., MLA author or title tags).</p>

Section VII. Calculator Guidance—Math

The AzMERIT calculator guidance was determined with the input of Arizona educators who have reviewed AzMERIT items. The guidelines were determined to provide appropriate support for students while still measuring a student’s mastery of the standards.

These guidelines are for the assessment only. They are not intended to limit instruction in the classroom. Technology is a part of the Arizona College and Career Ready Standards and students should still be interacting with technology as appropriate for engaging with and learning the standards.

The applicable portion of the CBT will include the acceptable online version of approved calculator. Providing handheld calculators is not a requirement for schools choosing the CBT. However, students may use an acceptable handheld calculator in addition to or instead of the online calculator.

Grades	Calculator Usage on AzMERIT Assessments
Grades 3–6	No calculators permitted on AzMERIT.
Grades 7–8	<p>Scientific Calculator permitted on AzMERIT Math Part 1 only. No calculators permitted on AzMERIT Math Part 2.</p> <p>Scientific calculator should include these functions: standard four functions (addition, subtraction, multiplication, division), decimal, change sign (+/-), parentheses, square root, and π. They may NOT include any problem solving or programming capabilities, place values, and inequalities.</p> <p>Sample acceptable calculator: TI-30X IIS or similar.</p>
High School End-of-Course Tests	<p>Graphing calculators permitted on AzMERIT Math Part 1 and Part 2.</p> <p>No calculators with Computer Algebra System (CAS) features are allowed. Calculators may NOT be capable of communication with other calculators through infrared sensors. NO instruction or formula cards, or other information regarding the operation of calculators such as operating manuals are permitted. The memory of any calculator with programming capability must be cleared, reset, or disabled when students enter the testing room. If the memory of any calculator is password protected, and cannot be cleared or reset, the calculator may NOT be used.</p> <p>Sample acceptable calculators: TI-84 Plus, Casio FX-9750GII, or similar.</p>
<ul style="list-style-type: none"> No laptop, tablet, or phone based calculators will be allowed during the AzMERIT assessment. Students are not allowed to share calculators during a testing session. 	

Section VIII. Paper-Based Testing (PBT)

Consumable Booklets

AzMERIT is a Computer-Based Test (CBT). However, a Paper-Based Test (PBT) is available for schools that opted out of the CBT. The PBT will consist of consumable test booklets. This means that there will be ***no separate answer documents***; students will answer the questions ***directly*** in the test booklets, and the test booklets will be scanned in their entirety by the vendor.

Some technology-enhanced items are converted for use on the Paper-Based Tests. Below are samples of various item types that will appear on the Paper-Based version of AzMERIT. This section also includes sample “Final Copy” pages from the Paper-Based Writing Test.

Sample Paper Items—ELA

While some items in the ELA portion of the test are shown as individual sample items in this guide all items on the AzMERIT CBT and PBT will be associated with one or more passages. The AzMERIT ELA test will have a Writing part, Reading Part 1 and Reading Part 2 for all grade levels. On paper the students will have access to one or more passages that relate to the prompt, a print copy of the Writing Guide and a “Final Copy” area to write their response. Below are examples that show how many of the CBT items will render on the PBT.

Multiple-Choice

Read the sentence below.

Julie noticed a brown bag sitting on the table.

What is the meaning of the word noticed as it is used in the sentence?

- Ⓐ placed
- Ⓑ saw
- Ⓒ took
- Ⓓ used

Key: B

Multi-Select

Which **two** words mean the same as huge?

- Ⓐ big
- Ⓑ cozy
- Ⓒ extra
- Ⓓ large
- Ⓔ tiny

Key: A, D

Sample Stimulus

Online Learning

- 1 Learning new things is an exciting part of life. Learning can happen anywhere. There are kids who learn at a school, kids who learn at home and some kids who learn online. Students who learn this way use their computers and the Internet to connect to online classrooms. They use a camera connected to their home computer to let the teacher and other students see them. They can see their teacher and classmates on their screens because their classmates and teacher use a camera, too.
- 2 Before the Internet, children in remote places sometimes had classes over the radio or used the mail to get lessons and return them. For example, in the past, children who lived in distant parts of Australia were taught using the radio. Every day at a certain time, they tuned in to a special radio station. All the children could hear their teacher at the same time, but they were hundreds of miles apart. They got their lessons in the mail, did their homework, and mailed it back to the teacher.
- 3 Today, students who live far away from their teacher have classes on the Internet. In some online classrooms, a classroom full of kids can use a special computer program at the same time as the teacher. The students can live in one country, and the teacher can be located in a different country. Still, it's just like a classroom at your school. The teacher can teach the kids. The kids can ask questions. Everyone can see and hear everything that's being said as it happens.
- 4 It is also possible for students to live in different places and be a part of an online class together. Each person goes to a website for the class they are taking. Thousands of people can watch and listen to this class at the same time. When they want to speak, they can use a microphone to ask and answer questions. When the lesson is completed and all good-byes have been said, the students and teacher in the online class log out. The connection over the Internet is broken, and the online classroom disappears.
- 5 Online classes can be held whenever is best for the teacher and students. Sometimes, they don't have to have a class where everyone is together all at once. There are classes where all the materials are posted on the website and students can use them whenever they need to. They can write questions and turn in their assignments. They can check back later to see if the teacher has left answers or comments on their work. No one ever actually "meets" anyone face-to-face, even if it's just with a web-camera. Many college classes are taught this way.
- 6 Internet classes can fit thousands of people, or just one person. It is a powerful way to let students everywhere learn. A student in Alaska and a student in China can go to the same class. That class can be taught by a teacher in Russia. You don't need a building, desks, lights or enough chairs to fit everyone. Students who live far apart, students who can't leave home, students who want to take a class they can't take nearby—all they need is a computer and an Internet connection and they're good to go!

Evidence-Based Selected Response

Part A

How has learning from distant places changed over time?

- Ⓐ Students can ask questions and get answers faster.
- Ⓑ Students can hear their teacher during the same class time.
- Ⓒ Students use the mail to receive and send work.
- Ⓓ Students live far apart from their classmates.

Part B

Select **one** sentence that supports the answer in part A.

- Ⓐ "The students can live in one country, and the teacher can be located in a different country."
- Ⓑ "All the children could hear their teacher at the same time, but they were hundreds of miles apart."
- Ⓒ "They got their lessons in the mail, did their homework, and mailed it back to the teacher."
- Ⓓ "Everyone can see and hear everything that's being said as it happens."
- Ⓔ "Sometimes, they don't have to have a class where everyone is together all at once."

Key:

Part A: A

Part B: D

Two-Part Hot Text

Part A

How does the author support the idea that students who live far from each other can learn together?

- Ⓐ She tells about why students should learn online.
- Ⓑ She shares details about the way students learn online.
- Ⓒ She gives examples of how online learning helps students.
- Ⓓ She explains that the online classroom is only for a short time.

Part B

Fill in the circle before the **two** sentences that support the answer in part A.

- 4 Ⓐ It is also possible for students to live in different places and be a part of an online class together. Ⓑ Each person goes to a website for the class they are taking. Ⓒ Thousands of people can watch and listen to this class at the same time. Ⓓ When they want to speak, they can use a microphone to ask and answer questions. Ⓔ When the lesson is completed and all good-byes have been said, the students and teacher in the online class log out. Ⓕ The connection over the Internet is broken, and the online classroom disappears.

Key:

Part A: B

Part B: C, D

One-Part Hot Text

Select **one** sentence that explains how jump rope rhymes have spread.

- Ⓐ Jumping rope is a fun game. Ⓑ To play, two people hold the ends of a rope and turn it. Ⓒ Others take turns jumping. Ⓓ Often, the turners call out rhymes for the jumpers. Ⓔ Some rhymes give the jumper directions. Ⓕ Some count how many times the jumper can jump before missing. Ⓖ Many rhymes have lasted a long time and spread to new places. Ⓗ Friends can teach each other rhymes, and children might learn them from their parents.

Key: H

Editing Task Stimulus

Koalas

Directions:

Read the following passage and answer Numbers 1 through 3. There are five underlined words or phrases in the passage to show which word or phrase may be incorrect.

Koalas are animals that live in Australia. They looked a little bit like small bears, but they are not bears. They are brown or gray, with round, fluffy ears, and they have no tails. You have probably seen pictures of koalas. They are very popular because they are so cute.

Koalas are herbivores, which means they eat plants. They live in trees and love to climb. Koalas are knowne to sleep up to 20 ours a day.

Many people around the world visit zoos to see koalas. They can live 13 to 18 years in the wild, but the older zoo koala on record lived to be 23 years old.

Editing Task Questions

Directions:

Now answer Numbers 1 through 3. Choose the correct word or phrase for each of the following.

1 Part A

They looked a little bit like small bears, but they are not bears.

- (A) look
- (B) will look
- (C) looks
- (D) Correct as is

Part B

They looked a little bit like small bears, but they are not bears.

- (A) or
- (B) nor
- (C) because
- (D) Correct as is

Key:

Part A: A

Part B: D

2 Part A

Koalas are knowne to sleep up to 20 ours a day.

- (A) knowen
- (B) known
- (C) none
- (D) Correct as is

Part B

Koalas are knowne to sleep up to 20 ours a day.

- (A) owers
- (B) howers
- (C) hours
- (D) Correct as is

Key:

Part A: B

Part B: C

3 They can live 13 to 18 years in the wild, but the older zoo koala on record lived to be 23 years old.

- (A) old
- (B) most old
- (C) oldest
- (D) Correct as is

Key: C

Writing Test Final Copy Pages (Grades 3-4)

W

SECURE MATERIALS—DO NOT COPY

FINAL COPY

Writing

Go On ►

Page 9

FINAL COPYThis image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

Writing

SECURE MATERIALS-DO NOT COPY

W

FINAL COPY

Go On ►
Page 11

Writing

Page 9

FINAL COPYThis image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Go On ►

FINAL COPY[illegible]

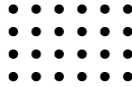
Page 11

Sample Paper Items—Math

The AzMERIT Math test will have a Math Part 1 and a Math Part 2. On the CBT and the PBT some math items are open-ended and hand scored. The following samples will familiarize students with how items appear on the paper version of AzMERIT.

Multiple Choice

A model is shown.



Which expression does this model represent?

- (A) $4 + 6$
- (B) $4 - 6$
- (C) 4×6
- (D) $4 \div 6$

Key: C

Equation Item

A classroom has 5 rows of desks. There are 6 desks in each row.

Create a multiplication equation that shows the number of desks in the classroom.

Write your equation in the box below.

Key: $5 \times 6 = 30$ or $6 \times 5 = 30$ are accepted.

Note: Equation may be reversed.

Equation Item

A fraction is shown.

$$\frac{1}{4}$$

Create an equivalent fraction with a denominator of 8.

	/	/	/	/	/		
.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

Notes regarding equation item response grids:

The item's response grid looks slightly different at different grade levels, but the general response area looks like the following image.

On these items, blanks are generally ignored. This means that students can left or right justify their response, or place it somewhere in the middle. Note: The purpose of the boxes above the grid are an aid to bubbling but are not scored.

These responses to the question shown above will all be scored as equivalent.

2	/	8					
	/	/	/	/	/		
.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

			2	/	8		
/	/	/	/	/	/		
.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

	2	/	8				
/	/	/	/	/	/		
.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

Mixed Numbers and Decimals: There are several options that will all be scored equivalent.

Example: where a correct response would be $1\frac{1}{2}$, all of the following would be scored as correct.

The image displays three sample test response grids for mixed numbers and decimals. Each grid consists of 10 columns and 10 rows of bubbles. The first grid shows the response '1 1 / 2' with bubbles filled for '1', '1', '/', and '2'. The second grid shows the response '3 / 2' with bubbles filled for '3', '/', and '2'. The third grid shows the response '1 . 5' with bubbles filled for '1', '.', and '5'.

Note that in the first example (that of the mixed number) the space between the ones is important. Without this space the response would be scored as eleven-halves.

Again, in any of these three shown responses, which column the student chooses to begin their response in does not matter.

Table Item

Complete the table to show each of the given numbers rounded to the nearest ten and the nearest hundred.

Number	Nearest Ten	Nearest Hundred
62		
115		

Key:

Number	Nearest Ten	Nearest Hundred
62	60	100
115	120	100

Open Response Item

A rectangle can be covered by 15 unit squares.

What can be said about the area of the rectangle?

Write your equation in the box below.

Key: The student correctly explained the relationship between the “15 unit squares” and the area of the rectangle (and did not include any incorrect statements).

Note: Any response that states that the area of the rectangle is 15 unit squares is accepted.

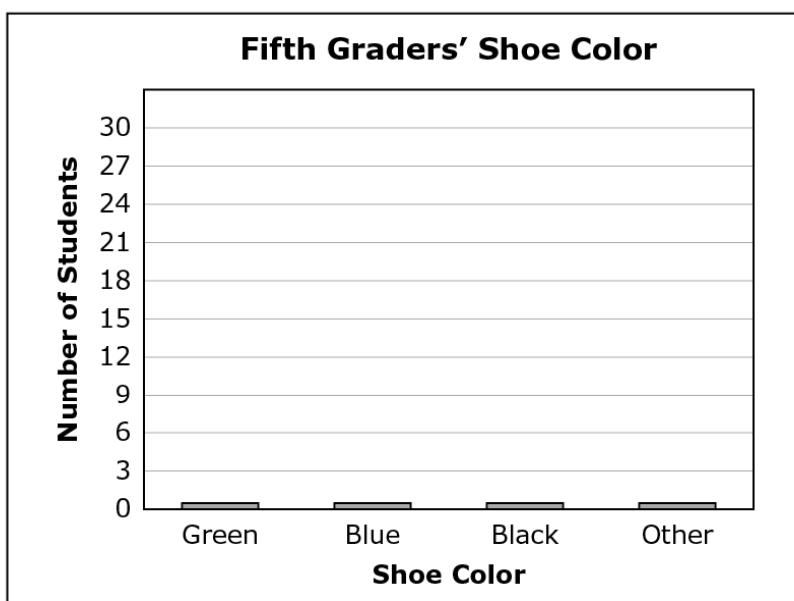
Grid Item

The table shows the shoe color of fifth graders at an elementary school.

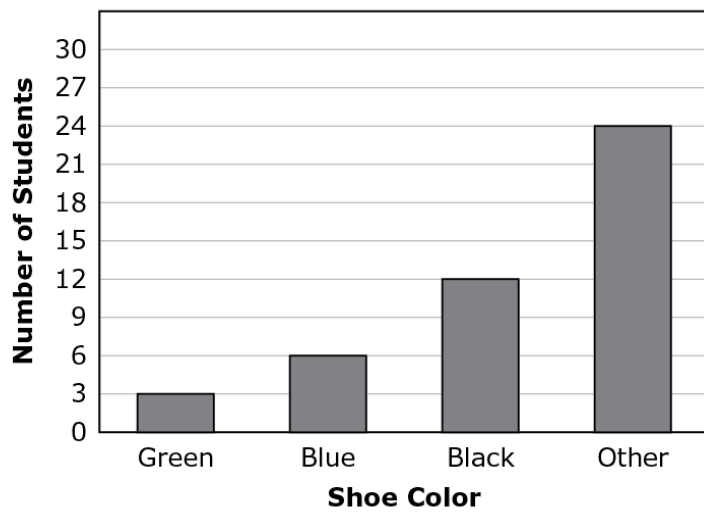
Shoe Color of Fifth Graders

Shoe Color	Number of Students
Green	3
Blue	6
Black	12
Other	24

Complete the bar graph to display the data from the table.



Key:



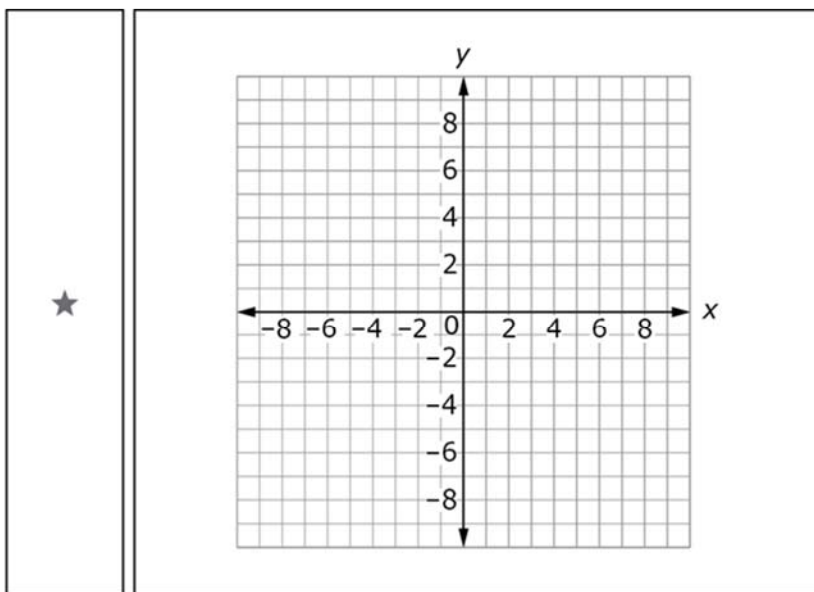
Grid Item

A system of equations is shown.

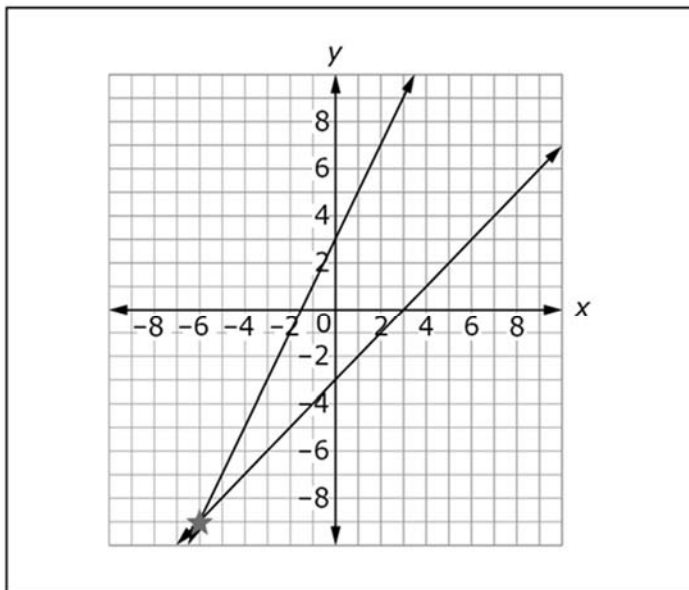
$$\begin{aligned}y &= 2x + 3 \\x - y &= 3\end{aligned}$$

Draw lines to graph the system.

Then draw a star to indicate the solution of the system.



Key:



Hot Text Item

The names of five shapes are shown.

Write a letter of a number in each empty box to order the shapes from least number of angles to greatest number of angles.

Shapes
A. Hexagon
B. Octagon
C. Pentagon
D. Rhombus
E. Triangle

Least ↓ Greatest	Ordered Shapes

Key:

Shapes
A. Hexagon
B. Octagon
C. Pentagon
D. Rhombus
E. Triangle

Least ↓ Greatest	Ordered Shapes
	E
	D
	C
	A
	B

Matching Item

Select the product for each expression.

	12	16	18
4×4	(A)	(B)	(C)
6×2	(D)	(E)	(F)
4×3	(G)	(H)	(I)
6×3	(J)	(K)	(L)
8×2	(M)	(N)	(O)

Key:

	12	16	18
4×4	(A)	(B)	(C)
6×2	(D)	(E)	(F)
4×3	(G)	(H)	(I)
6×3	(J)	(K)	(L)
8×2	(M)	(N)	(O)

Section IX. CBT Sample Test Answer Keys

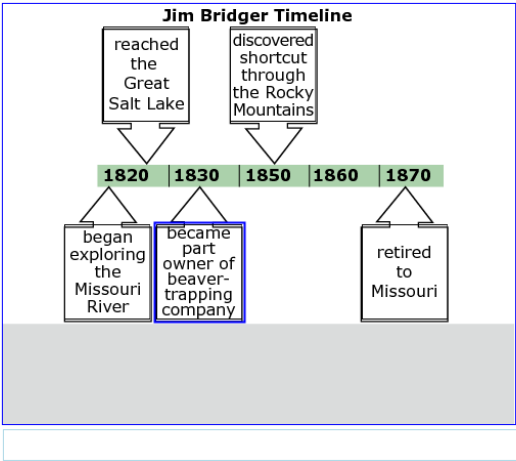
Grades 3–5 ELA Reading

Question #	Item Type	Answer Key/Correct Answer
1	Multiple-Choice	A
2	Multiple-Choice	B
3	Hot Text	<p>The student correctly identified two sentences.</p> <ul style="list-style-type: none"> • The teacher can teach the kids. • The kids can ask questions. • Everyone can see and hear everything that's being said as it happens.
4	Natural Language	<p>The student correctly identified a main idea of paragraph 4 that meets the requirements of the rubric.</p> <ul style="list-style-type: none"> • People living in different places can have online class. • People living far away can become/join class online. • People living far away can have class online. • People living in different places can become/join an online class. • Classes can have people/students from anywhere. • People can learn from anywhere.
5	Two-Part Hot Text	<p><i>Part A:</i> The student correctly identified option B in Part A.</p> <p><i>Part B:</i> The student correctly identified two sentences that support the correct answer in Part B.</p> <ul style="list-style-type: none"> • Thousands of people can watch and listen to this class at the same time. • When they want to speak, they can use a microphone to ask and answer questions.
6	Hot Text	They can write questions and turn in their assignments.
7	Multi-Select	C; E
8	Grid Item	Any response where the camera and computer are placed in the box.
9	Multi-Select	A; D
10	Evidence-Based Selected Response	<p><i>Part A:</i> The student correctly selected option A.</p> <p><i>Part B:</i> The student correctly selected option D.</p>

Question #	Item Type	Answer Key/Correct Answer
11	Multiple-Choice	A
12	Multiple-Choice	B
13	Multi-Select	A; D; E
14	Editing Task	<i>Part A:</i> The student correctly selected “look” for the first option. <i>Part B:</i> The student correctly selected “but” for the second option.
15	Editing Task	<i>Part A:</i> The student correctly selected “known” for the first option. <i>Part B:</i> The student correctly selected “hours” for the second option.
16	Editing Task	The student correctly selected “oldest.”

Grades 6–8 ELA Reading

Question #	Item Type	Answer Key/Correct Answer
1	Multiple-Choice	A
2	Two-Part Hot Text	<p><i>Part A:</i> The student correctly identified option D.</p> <p><i>Part B:</i> The student correctly identified two phrases that support the correct answer in Part B.</p> <ul style="list-style-type: none"> • often unbelievable • outrageous stories
3	Natural Language	<p><i>Part A:</i> The student correctly identified why “petrified” is used in the sentence.</p> <ul style="list-style-type: none"> • To explain/show/emphasize/tell how Bridger/he talks/talked/speaks/spoke. <p><i>Part B:</i> The student did not include any incorrect statements.</p>
4	Multiple-Choice	D
5	Evidence-Based Selected Response	<p><i>Part A:</i> The student correctly selected option C for Part A.</p> <p><i>Part B:</i> The student correctly selected option B for Part B.</p>
6	Multi-Select	A; C; E
7	Multiple-Choice	B
8	Draggable Hot Text	<p>The student correctly identified three sentences (in order) to complete a summary of the passage.</p> <ul style="list-style-type: none"> • As a young man, Bridger helped explore parts of what is now the western United States. • Bridger became a successful beaver trapper famous for his tall tales. • Bridger worked as a guide and discovered a shortcut through the Rocky Mountains.

Question #	Item Type	Answer Key/Correct Answer
9	Grid Item	<p>Place the phrases about Jim Bridger's life in the correct locations on the timeline.</p>  <p>The student correctly places five events from Jim Bridger's life in the correct order on the time line.</p>
10	Editing Task	<p>The student correctly entered a phrase to complete the sentence accurately:</p> <ul style="list-style-type: none"> • volleyball, named • volleyball. It was named • volleyball; it was named
11	Editing Task	<p><i>Part A:</i> The student correctly entered "volleyball" for the first option.</p> <p><i>Part B:</i> The student correctly entered "their" for the second option.</p>
12	Editing Task	<p><i>Part A:</i> The student correctly entered "world, has" for the first option.</p> <p><i>Part B:</i> The student correctly entered "frequent" or "often" for the second option.</p>
13	Editing Task	<p>The student correctly identified "us" as the correction.</p>
14	Editing Task	<p><i>Part A:</i> The student correctly selected "various feathers from" for the first option.</p> <p><i>Part B:</i> The student correctly selected "China, while" for the second option.</p>
15	Editing Task	<p><i>Part A:</i> The student correctly selected "promotes" for the first option.</p> <p><i>Part B:</i> The student correctly selected "protection," for the second option.</p>
16	Multiple-Choice	A

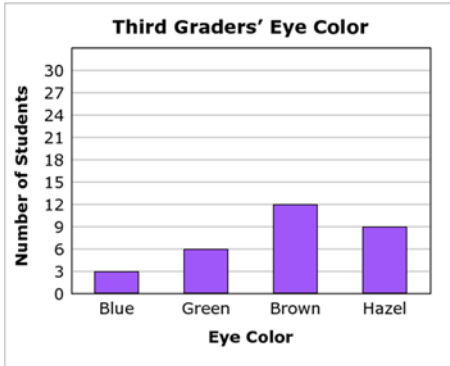
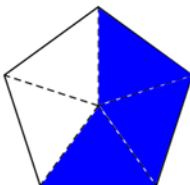
Question #	Item Type	Answer Key/Correct Answer
17	Multi-Select	C; D
18	Multiple-Choice	C

Grades 9–11 ELA Reading

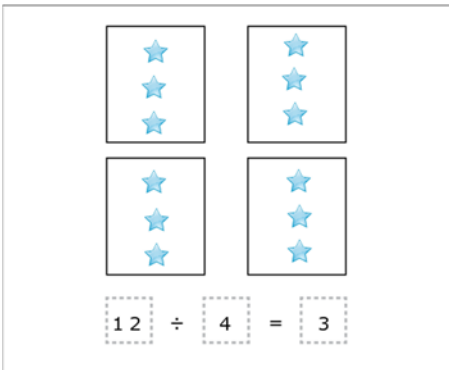
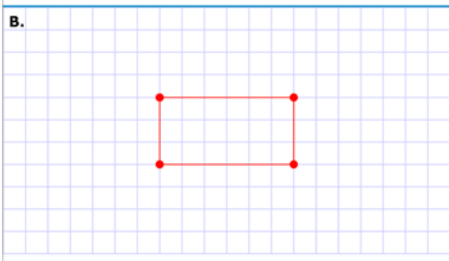
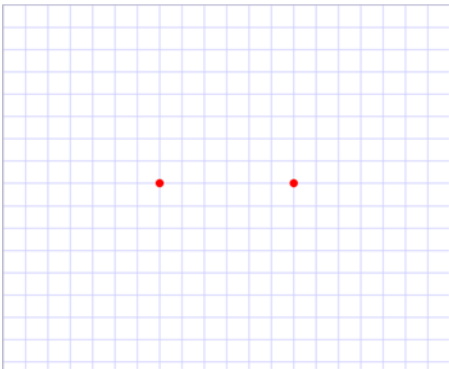
Question #	Item Type	Answer Key/Correct Answer
1	Multiple-Choice	C
2	Multiple-Choice	B
3	Evidence-Based Selected Response	<i>Part A:</i> The student correctly selected option A. <i>Part B:</i> The student correctly selected option B.
4	Hot Text	The student correctly identified two details: <ul style="list-style-type: none"> the way the expanse of water stretched out so far into the distance that it seemed to go on forever. OR <ul style="list-style-type: none"> Who knew what lay beneath it all? OR <ul style="list-style-type: none"> with the utter vastness of the ocean itself,
5	Two-Part Hot Text	<i>Part A:</i> The student correctly identified option B. <i>Part B:</i> The student correctly identified one detail that supports the correct answer in Part B. <ul style="list-style-type: none"> I was certain that I had passed some boundary and entered a world where I did not belong.
6	Natural Language	The student correctly identified what the reader learns about the narrator in the last paragraph. <ul style="list-style-type: none"> The narrator is determined/resolved/willing to take chances. She is ready to try new things/face challenges/face her fears. The student did not include any incorrect statements.
7	Multi-Select	B; C
8	Grid Item	<i>Part A:</i> The student correctly places the characteristics of the Narrator in the diagram. <ul style="list-style-type: none"> Reflective cautious <i>Part B:</i> The student correctly places the characteristics of Cassie in the diagram. <ul style="list-style-type: none"> adventurous sure <i>Part C:</i> The student correctly places the characteristics of Both in the diagram. <ul style="list-style-type: none"> determined Impressed by the ocean

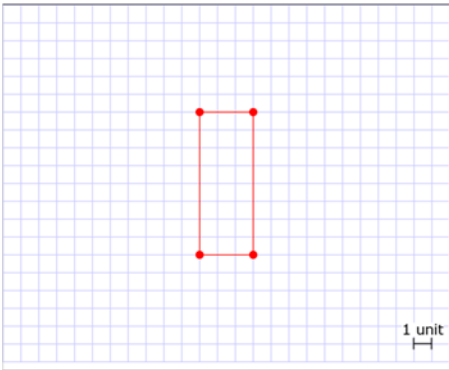
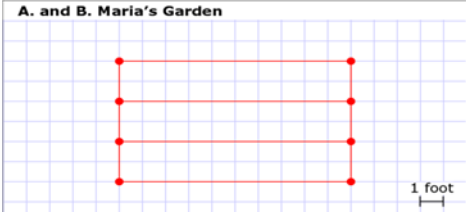
Question #	Item Type	Answer Key/Correct Answer
9	Draggable Hot Text	<p>The student correctly identified four sentences in order to complete a summary of the passage.</p> <ul style="list-style-type: none"> • A high school student goes snorkeling with her friend. • The narrator is concerned about the prospect of leaving for college. • The narrator is hesitant to snorkel because she has not enjoyed it in the past. • The narrator decides to trust her friend and go snorkeling even though she is afraid.
10	Multiple-Choice	C
11	Multiple-Choice	A
12	Multi-Select	A;C
13	Editing Task	<p><i>Part A:</i> The student correctly entered “comforter” for the first option.</p> <p><i>Part B:</i> The student correctly entered a phrase to complete the sentence accurately for the second option.</p> <ul style="list-style-type: none"> • found • to be found • that are/can be found • that one/we/you can find
14	Editing Task	<p><i>Part A:</i> The student correctly entered “for” for the first option.</p> <p><i>Part B:</i> The student correctly entered “past,” for the second option.</p>
15	Editing Task	<p>The student correctly entered a word or phrase to complete the sentence accurately:</p> <ul style="list-style-type: none"> • feathers; • feathers, and/but/while/whereas
16	Editing Task	<p><i>Part A:</i> The student correctly selected “sports: tennis” for the first option.</p> <p><i>Part B:</i> The student correctly selected “volleyball; the name” for the second option.</p>
17	Editing Task	Brazil, players
18	Editing Task	<p><i>Part A:</i> The student correctly selected “world, and it” for the first option.</p> <p><i>Part B:</i> The student correctly selected “since 1964” for the second option.</p>

Grades 3–4 Math

Question #	Item Type	Answer Key/Correct Answer										
1	Grid Item	<div><p>Third Graders' Eye Color</p><table border="1"><thead><tr><th>Eye Color</th><th>Number of Students</th></tr></thead><tbody><tr><td>Blue</td><td>3</td></tr><tr><td>Green</td><td>6</td></tr><tr><td>Brown</td><td>12</td></tr><tr><td>Hazel</td><td>9</td></tr></tbody></table></div>	Eye Color	Number of Students	Blue	3	Green	6	Brown	12	Hazel	9
Eye Color	Number of Students											
Blue	3											
Green	6											
Brown	12											
Hazel	9											
2	Multi-Select	A; D; F										
3	Multi-Select	A; D										
4	Equation	38; 36 <i>Responses may be in any order.</i>										
5	Grid Item	<div><p>A. Shade an area greater than $\frac{1}{2}$ and less than 1</p><p>B. Area shaded</p><table><tr><td>3</td></tr><tr><td>5</td></tr></table></div> <p>Part A: Any 3 or 4 sections are shaded.</p> <p>Part B: A correct fraction based on the shaded pentagon in Part A.</p>	3	5								
3												
5												

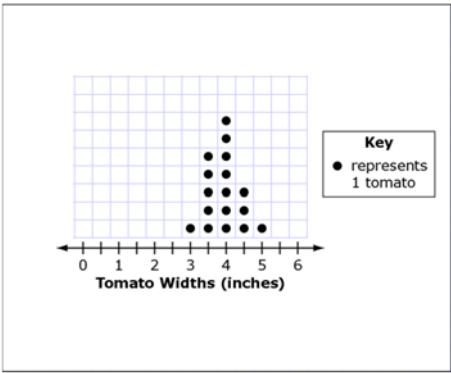
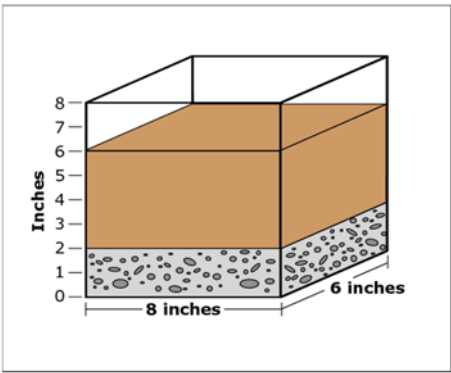
Question #	Item Type	Answer Key/Correct Answer
6	Grid Item	<p>X = 2 students</p> <p>There are 18 more students that like going hiking than camping.</p>
7	Multiple-Choice	C
8	Natural Language	<p>All three sides are the same length.</p> <p><i>Any statement that includes that all three sides are the same is accepted and does not include any incorrect statements.</i></p>
9	Grid Item	
10	Multiple-Choice	D
11	Multiple-Choice	A

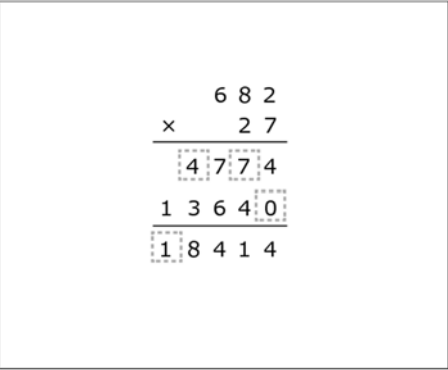
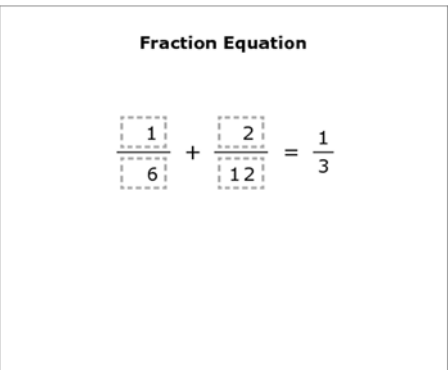
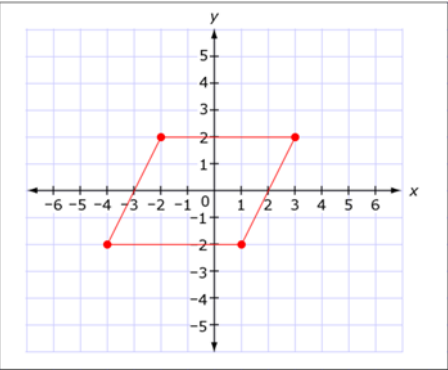
Question #	Item Type	Answer Key/Correct Answer
12	Grid Item	 <p><i>Stars: The three stars can be in any orientation in each solid box. Numbers in the solid boxes are ignored.</i></p> <p><i>Equation: $12 \div 3 = 4$ is also accepted. Stars in dashed boxes are ignored.</i></p>
13	Grid Item	<p>A. My shape is: a square a rectangle</p> <p>My shape is <i>not</i>: a rhombus</p> <p>B.</p>  <p><i>Any rectangle that is not a square is accepted.</i></p>
14	Grid Item	 <p><i>Any 2 points 6 units apart are accepted.</i></p>
15	Equation	<p>$48 \times 28 = 1344$</p> <p><i>Any equivalent equation based on the commutative property is also accepted.</i></p>

Question #	Item Type	Answer Key/Correct Answer												
16	Equation	$(40 + 4)(30 + 7)$; 1628 <i>Any expression equivalent to 1628 that contains multiplication is accepted.</i> <i>Response may be in any order.</i>												
17	Grid Item	 <p><i>Any rectangle with an area of 24 square units is accepted.</i></p>												
18	Grid Item	<p>A. and B. Maria's Garden</p>  <p>C. Equation</p> $60 \div 3 = 20$ <p><i>Any large rectangle with an area of 60 that is divided into equal rows, whether horizontally or vertically, is accepted. Any equation based on the diagram is accepted.</i></p>												
19	Table	<table> <tr> <th>Number</th><th>Rounded to the Nearest 10</th><th>Rounded to the Nearest 100</th></tr> <tr> <td>794</td><td>790</td><td>800</td></tr> <tr> <td>506</td><td>510</td><td>500</td></tr> <tr> <td>97</td><td>100</td><td>100</td></tr> </table>	Number	Rounded to the Nearest 10	Rounded to the Nearest 100	794	790	800	506	510	500	97	100	100
Number	Rounded to the Nearest 10	Rounded to the Nearest 100												
794	790	800												
506	510	500												
97	100	100												


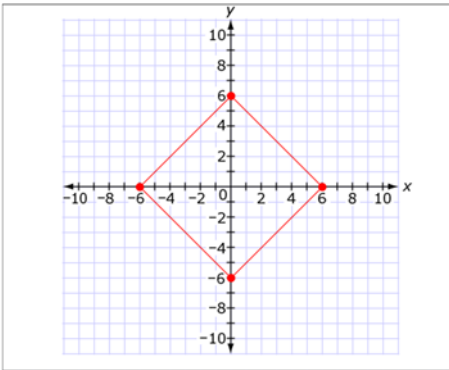
Question #	Item Type	Answer Key/Correct Answer																		
20	Matching	<table border="1"> <thead> <tr> <th></th><th>Prime</th><th>Composite</th></tr> </thead> <tbody> <tr> <td>12</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>35</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr> <td>17</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr> <td>41</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr> <td>72</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> </tbody> </table>		Prime	Composite	12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17	<input checked="" type="checkbox"/>	<input type="checkbox"/>	41	<input checked="" type="checkbox"/>	<input type="checkbox"/>	72	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Prime	Composite																		
12	<input type="checkbox"/>	<input checked="" type="checkbox"/>																		
35	<input type="checkbox"/>	<input checked="" type="checkbox"/>																		
17	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
41	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
72	<input type="checkbox"/>	<input checked="" type="checkbox"/>																		
21	Equation	3; 180																		
22	Evidence-Based Selected Response	<p><i>Part A:</i> The student correctly selected option D.</p> <p><i>Part B:</i> The student correctly selected option A.</p>																		

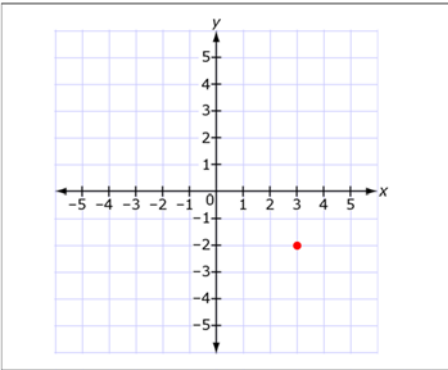
Grades 5–6 Math

Question #	Item Type	Answer Key/Correct Answer
1	Equation	243; 243
2	Multi-Select	A; D; E; F
3	Multi-Select	A; C; D
4	Equation	$a \times 10 = e$ <i>Any equivalent equation is accepted.</i>
5	Equation	$3A = B$ <i>Any equivalent equation is accepted.</i>
6	Grid Item	
7	Grid Item	 <p><i>Models showing the top of the soil from 5 to 7 inclusive are accepted.</i></p>

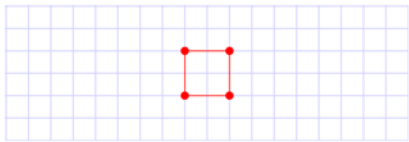
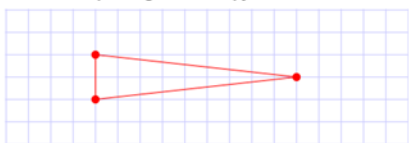
Question #	Item Type	Answer Key/Correct Answer
8	Grid Item	
9	Grid Item	<p>Fraction Equation</p>  <p><i>Any valid equation with two fractions with different denominators is accepted.</i></p>
10	Grid Item	 <p><i>Parallelograms with the fourth vertex located at (6, -2) or (0, 6) are also accepted.</i></p>
11	Natural Language	<p>The area of the triangle is half the area of the square.</p> <p><i>The student states that the area of the triangle is half the area of the square or the area of the square is twice the area of a triangle.</i></p> <p><i>The student did not make an incorrect statement.</i></p>

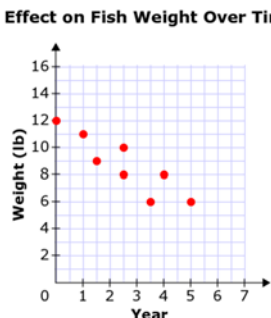
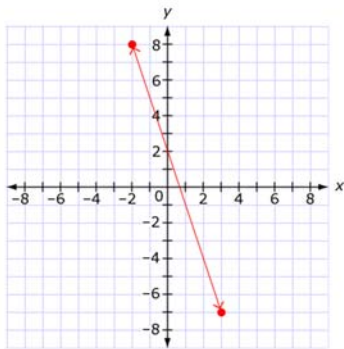
Question #	Item Type	Answer Key/Correct Answer
12	Grid Item	<div style="border: 1px solid black; padding: 10px; text-align: center;"> $-4 < -1$ $-4 < 1$ $-3 > -6$ </div>
13	Grid Item	<div style="border: 1px solid black; padding: 10px; text-align: center;"> $16 + [9 \times (3 - 1) + 8] \div 2$ $16 + [9 \times 2 + 8] \div 2$ $16 + [9 \times 2 + 4]$ $16 + [18 + 4]$ $16 + 22$ 38 $16 + [9 \times (3 - 1) + 8] \div 2 = 29$ </div>
14	Grid Item	<div style="border: 1px solid black; padding: 10px;"> <p>A.</p> <div style="text-align: center; margin-bottom: 20px;"> $(8 + 6) \times 3$ </div> <hr style="border: 0.5px solid blue;"/> <p>B.</p> <div style="text-align: center;"> $(8 \times 3) + (6 \times 3)$ </div> </div> <p><i>Part A: Any equivalent expression based on the commutative properties is accepted.</i></p> <p><i>Part B: Any equivalent expression based on the commutative properties is accepted.</i></p>
15	Equation	<p>$A + 10 = B; B - 10 = A$</p> <p><i>Any pair of equations that are both equivalent to $A + 10 = B$ and are different from one another apart from the commutative properties is accepted.</i></p>

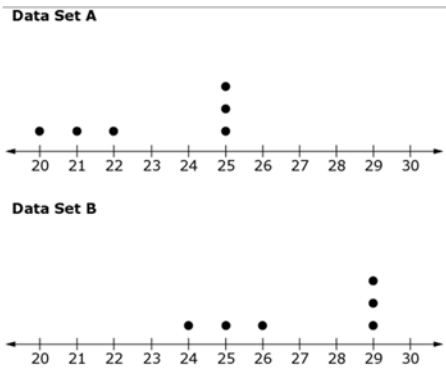
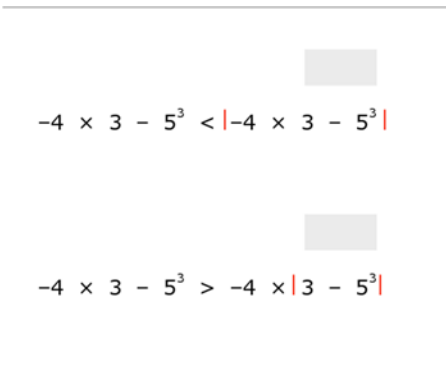
Question #	Item Type	Answer Key/Correct Answer
16	Equation	$M = 2P$ <i>Any equivalent equation is accepted.</i>
17	Multiple-Choice	D
18	Grid Item	 <p><i>Any pentagon satisfying the stem requirements is accepted.</i></p>
19	Equation	$\frac{5}{12}; \frac{1}{6}$ <i>Any two fractions whose sum is $\frac{7}{12}$ and have different denominators are accepted.</i>
20	Grid Item	
21	Multiple-Choice	C

Question #	Item Type	Answer Key/Correct Answer																				
22	Grid Item																					
23	Table	<table><tr><th>t</th><th>d</th></tr><tr><td>1</td><td>65</td></tr><tr><td>2</td><td>130</td></tr><tr><td>3</td><td>195</td></tr></table>	t	d	1	65	2	130	3	195												
t	d																					
1	65																					
2	130																					
3	195																					
24	Matching	<table><tr><th></th><th>Greater than 3</th><th>Equal to 3</th><th>Less than 3</th></tr><tr><td>$3 \times \frac{1}{2}$</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>$3 \times 1\frac{1}{4}$</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$3 \times \frac{6}{6}$</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$3 \times \frac{3}{2}$</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>		Greater than 3	Equal to 3	Less than 3	$3 \times \frac{1}{2}$	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	$3 \times 1\frac{1}{4}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	$3 \times \frac{6}{6}$	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	$3 \times \frac{3}{2}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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$3 \times \frac{3}{2}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
25	Equation	$\frac{14}{15} \cdot \frac{1}{15}$																				
26	Evidence-Based Selected Response	<p>Part A: The student correctly selected option C.</p> <p>Part B: The student correctly selected options B and E.</p>																				

Grades 7–8 Math

Question #	Item Type	Answer Key/Correct Answer												
1	Grid Item	<div><div>A. One possible base of the pyramid</div><div></div><div>B. The corresponding face of the pyramid</div><div></div></div> <p>Any square in Part A with a side length of 2 with any isosceles triangle in Part B with a base of 2 and a height of 9 or any square in Part A with a side length of 4 inches with any isosceles triangle in Part B with a base of 4 and a height of 3 is also accepted..</p>												
2	Multiple-Choice	B												
3	Multiple-Choice	B												
4	Grid Item	<table><thead><tr><th colspan="2">Rational Numbers</th><th colspan="2">Irrational Numbers</th></tr></thead><tbody><tr><td>$\sqrt[3]{8}$</td><td>$0.\overline{6}$</td><td>$\sqrt{3}$</td><td>$\sqrt[3]{9}$</td></tr><tr><td>7.3</td><td>$\sqrt{9}$</td><td>π</td><td></td></tr></tbody></table>	Rational Numbers		Irrational Numbers		$\sqrt[3]{8}$	$0.\overline{6}$	$\sqrt{3}$	$\sqrt[3]{9}$	7.3	$\sqrt{9}$	π	
Rational Numbers		Irrational Numbers												
$\sqrt[3]{8}$	$0.\overline{6}$	$\sqrt{3}$	$\sqrt[3]{9}$											
7.3	$\sqrt{9}$	π												
5	Equation	$\frac{1}{9}$ <p>Any positive fraction equivalent to $\frac{1}{9}, \frac{1}{7},$ or $\frac{1}{6},$ or any negative fraction that meets all three parameters and where the denominator is not exclusively a multiple of 2 and/or 5 is accepted.</p>												

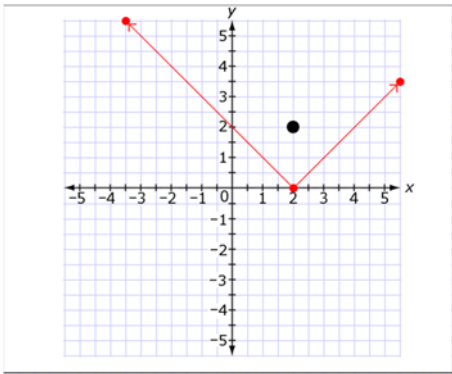
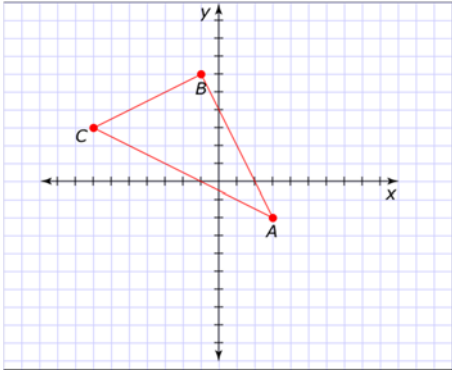
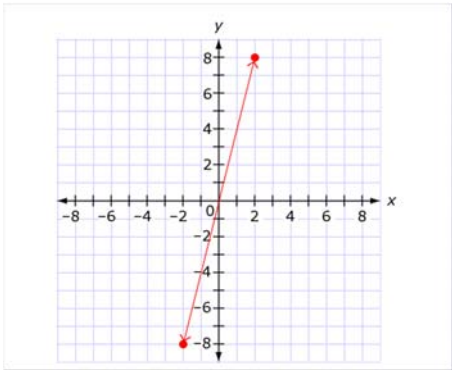
Question #	Item Type	Answer Key/Correct Answer
6	Grid Item	 <p>Any scatter plot that contains 8 data points and has a negative association is accepted.</p>
7	Multi-Select	A; B; C
8	Equation	$\frac{1}{250}$ <p>Any expression with a value equivalent to $\frac{1}{250}$ is accepted.</p>
9	Grid Item	 <p>Any line with a slope of -3 and a y-intercept of 2 is accepted.</p>
10	Equation	<p>200</p> <p>Any expression with a value equivalent to 200 is accepted.</p>
11	Multi-Select	A; D; E
12	Natural Language	<p>The variable b is odd. Since a is negative, b must be odd otherwise a raised to an even power would mean c is positive.</p> <p>The student states that b is an odd number or that b is not divisible by 2 with an explanation that states that a and c cannot both be negative unless b is odd.</p> <p>The student did not make an incorrect statement.</p>

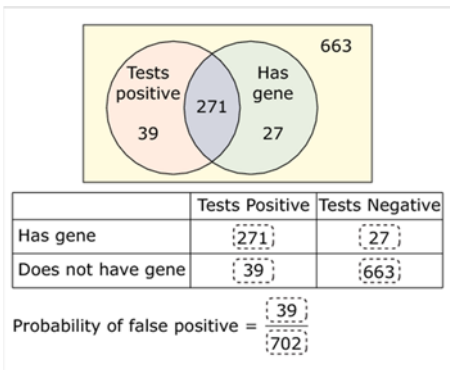
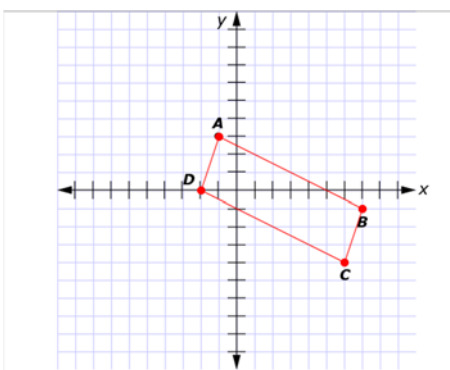
Question #	Item Type	Answer Key/Correct Answer
13	Grid Item	 <p>Any data set with 6 data points, a mean absolute deviation of 2, and a mean of 27 is accepted.</p>
14	Grid Item	 <p>First inequality: Any of the following expressions are accepted.</p> <ul style="list-style-type: none"> $-4 \times 3 - 5^3 < -4 \times 3 - 5^3$ $-4 \times 3 - 5^3 < -4 \times 3 - 5^3$ $-4 \times 3 - 5^3 < -4 \times 3 - 5^3$
15	Equation	$a = 20d + 43$ Any equation equivalent to $a = 20d + 43$ is accepted.
16	Equation	4; 2 Any pair of values equivalent to 2 and 4, in any order is accepted.
17	Equation	3; 2 <i>x</i> -value: Any expression with a value of 3 is accepted. <i>y</i> -value: Any expression with a value of 2 is accepted.

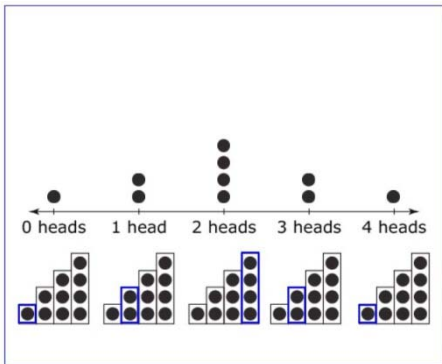
Question #	Item Type	Answer Key/Correct Answer																				
18	Table	<table><tr><td></td><td>Own a Bike</td><td>Do Not Own a Bike</td><td>Total</td></tr><tr><td>Boys</td><td>12</td><td>13</td><td>25</td></tr><tr><td>Girls</td><td>19</td><td>6</td><td>25</td></tr><tr><td>Total</td><td>31</td><td>19</td><td>50</td></tr></table> <p>Any table that shows more girls own bikes than boys with correct row and column totals is accepted.</p>		Own a Bike	Do Not Own a Bike	Total	Boys	12	13	25	Girls	19	6	25	Total	31	19	50				
	Own a Bike	Do Not Own a Bike	Total																			
Boys	12	13	25																			
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Total	31	19	50																			
19	Matching	<table><tr><td></td><td>Greater than zero</td><td>Less than zero</td><td>Equal to zero</td></tr><tr><td>$7 - (-7)$</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$7 + (-7)$</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>$(-7) + (-7)$</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$(-7) - 7$</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>		Greater than zero	Less than zero	Equal to zero	$7 - (-7)$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	$7 + (-7)$	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	$(-7) + (-7)$	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	$(-7) - 7$	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Greater than zero	Less than zero	Equal to zero																			
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20	Evidence-Based Selected Response	<p>Part A: The student correctly selected option C.</p> <p>Part B: The student correctly selected options B and C.</p>																				

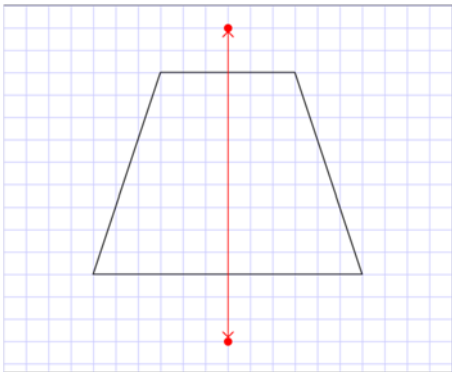
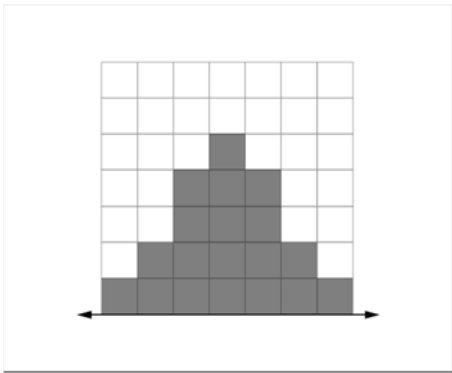
High School Math

Question #	Item Type	Answer Key/Correct Answer
1	Grid Item	<p>Answers with 2 and 3, 5 and 8, or 6 and 7 selected are also accepted.</p>
2	Equation	$\frac{16}{27}x^3 - \frac{4}{9}x^2 + \frac{1}{3}x$ <p>Any expression equivalent to $\frac{16}{27}x^3 - \frac{4}{9}x^2 + \frac{1}{3}x$ is accepted.</p>
3	Multiple-Choice	B
4	Multiple-Choice	C
5	Multi-Select	B; C; E
6	Equation	<p>0.92</p> <p>Any value equivalent to 0.92 (probability) or 92 (percent) is accepted.</p>
7	Equation	<p>0.005</p> <p>Any estimated difference with an absolute value less than or equal to 0.01 is accepted.</p>

Question #	Item Type	Answer Key/Correct Answer
8	Grid Item	 <p><i>Lengths of boundary rays are ignored.</i></p> <p><i>Multiple circles are allowed and may be placed on or between and above the boundary rays.</i></p>
9	Grid Item	 <p><i>Any right triangle where all vertices are labeled and the right angle is at point B is accepted.</i></p>
10	Grid Item	 <p><i>Any line that has a slope of 4 and a y-intercept greater than -4 is accepted.</i></p>

Question #	Item Type	Answer Key/Correct Answer									
11	Equation	$y \geq \frac{3}{2} x - 2 $ Any inequality equivalent to $y \geq \frac{3}{2} x - 2 $ is accepted.									
12	Equation	17; 19 A pair of expressions equivalent to 17 and 19 or -17 and -19 is accepted. The expressions may be in any order.									
13	Multi-Select	B; D; F									
14	Grid Item	 <p>The Venn diagram shows two overlapping circles. The left circle is labeled 'Tests positive' and contains the number 39. The right circle is labeled 'Has gene' and contains the number 27. The intersection of the two circles contains the number 271. The number 663 is written outside the right circle. Below the Venn diagram is a contingency table:</p> <table border="1"> <thead> <tr> <th></th><th>Tests Positive</th><th>Tests Negative</th></tr> </thead> <tbody> <tr> <td>Has gene</td><td>271</td><td>27</td></tr> <tr> <td>Does not have gene</td><td>39</td><td>663</td></tr> </tbody> </table> <p>Below the table, the probability of false positive is calculated as:</p> $\text{Probability of false positive} = \frac{39}{702}$		Tests Positive	Tests Negative	Has gene	271	27	Does not have gene	39	663
	Tests Positive	Tests Negative									
Has gene	271	27									
Does not have gene	39	663									
15	Grid Item	 <p>The coordinate plane shows a triangle with vertices A, B, and C. Point A is at (0, 6), point B is at (4, 2), and point C is at (2, -2). Point D is located on the y-axis at (0, 6), which is the same location as point A. The x and y axes are labeled with arrows and tick marks.</p> <p>Only one label for D is allowed. Point D may be at (0, 6).</p>									
16	Equation	32 Any expression with a value equivalent to 32 is accepted.									

Question #	Item Type	Answer Key/Correct Answer
17	Grid Item	 <p>Any dot plot containing 10 data points is accepted.</p>
18	Equation	-24; 43/3
19	Multiple-Choice	D
20	Equation	11
21	Equation	$g(x) = 6x^2 + 9x + 13; 13$ Any function equivalent to $g(x) = 6x^2 + 9x + 13$ where $g(x)$ is isolated is accepted. Any expression equivalent to $6x^2 + 9x + 13$ is accepted. Any expression equivalent to 13 is accepted..
22	Equation	$\frac{Ax + By}{A + B}$ Any expression equivalent to $\frac{Ax+By}{A+B}$ is accepted.
23	Equation	$(x - 5)^2 + (y - 6)^2 = 36$ Any equation equivalent to $(x - 5)^2 + (y - 6)^2 = 36$ is accepted.

Question #	Item Type	Answer Key/Correct Answer
24	Grid Item	 <p><i>The length of the line is ignored.</i></p>
25	Equation	0.25; 0.5
26	Grid Item	 <p><i>Any histogram is accepted where the column heights of each corresponding pair of data are within one unit of each other and the heights of the columns are increasing from the left to the middle and decreasing from the middle to the right.</i></p>
27	Natural Language	<p>Either a is an irrational number and b is a rational number, or a is a rational number and b is an irrational number, or both are irrational numbers but the product of the two cannot be written as a rational number.</p> <p><i>The student states that if one variable is rational then the other variable is irrational.</i></p> <p><i>The student states that if both variables are irrational, then the product does not reduce to a rational number.</i></p> <p><i>The student did not make an incorrect statement.</i></p>

Question #	Item Type	Answer Key/Correct Answer															
28	Table	<table><tr><th>x</th><th>$g(x)$</th></tr><tr><td>0</td><td>9</td></tr><tr><td>1</td><td>19</td></tr><tr><td>2</td><td>29</td></tr><tr><td>3</td><td>39</td></tr></table> <p>Any table based on the function $g(x) = mx + 9$ where $m > 7$ is accepted.</p>	x	$g(x)$	0	9	1	19	2	29	3	39					
x	$g(x)$																
0	9																
1	19																
2	29																
3	39																
29	Matching	<table><tr><th></th><th>Rational</th><th>Irrational</th></tr><tr><td>$\sqrt{7} + \sqrt{9}$</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>$\sqrt{8} \cdot \sqrt{8}$</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$\sqrt{100} + \sqrt{1}$</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$\sqrt{2} \cdot \sqrt{24}$</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>		Rational	Irrational	$\sqrt{7} + \sqrt{9}$	<input type="checkbox"/>	<input checked="" type="checkbox"/>	$\sqrt{8} \cdot \sqrt{8}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	$\sqrt{100} + \sqrt{1}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	$\sqrt{2} \cdot \sqrt{24}$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Rational	Irrational															
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$\sqrt{100} + \sqrt{1}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>															
$\sqrt{2} \cdot \sqrt{24}$	<input type="checkbox"/>	<input checked="" type="checkbox"/>															
30	Equation	1; 2															
31	Evidence-Based Selected Response	<p>Part A: The student correctly selected option D.</p> <p>Part B: The student correctly selected options D.</p>															